

In The Claims

1. (Canceled)

2. (Currently Amended) ~~The apparatus of claim 1;~~ An apparatus, comprising:
a heat generating component;
a heat conducting base plate thermally coupled to said heat generating component;
a plurality of heat conducting pin-fins, each of said pin-fins having a free end and an
attachment end, the attachment end of each of said pin-fins being attached to said base
plate, each of said pin-fins having an intake opening wherein the intake opening is
oriented to admit cooling fluid moving in a first direction substantially parallel to said base
plate, each of said pin-fins having a discharge opening for discharging cooling fluid, each
of said pin-fins having a tubular channel extending from the intake opening to the discharge
opening, wherein the discharge opening of each of said pin-fins is oriented to discharge
cooling fluid in the first direction, +/- 90 degrees; and
a pump system for moving cooling fluid in the first direction substantially parallel to
said base plate such that cooling fluid moves over the exterior surface and through the
tubular channel of each of said pin-fins.

3. (Original) The apparatus of claim 2, further comprising a baffle adjacent the free end of each of said pin-fins and substantially parallel to said base plate for ducting cooling fluid between said base plate and said baffle.

4. (Original) The apparatus of claim 2, further comprising a ducting system comprising:

a first baffle adjacent the free end of each of said pin-fins and substantially parallel to said base plate; and

a second and third baffles positioned substantially parallel to the first direction and substantially perpendicular to said first baffle;

wherein cooling fluid from said pump system is ducted between said first, second and third baffles and discharged from said ducting system in substantially the first direction.

5. (Currently Amended) The apparatus of claim ~~[[1]]~~ 2, further comprising a baffle adjacent the free end of each of said pin-fins and substantially parallel to said base plate for ducting cooling fluid between said base plate and said baffle.

6. (Currently Amended) The apparatus of claim ~~[[1]]~~ 2, further comprising a ducting system comprising:

a first baffle adjacent the free end of each of said pin-fins and substantially parallel to said base plate; and

~~[[a]]~~ second and third baffles positioned substantially parallel to the first direction and substantially perpendicular to said first baffle;

wherein cooling fluid from said pump system is ducted between said first, second and third baffles and discharged from said ducting system in substantially the first direction.

7. (Canceled)

8. (Currently Amended) ~~The heat sink of claim 7~~ A heat sink, comprising:
a heat conducting base plate;

a plurality of heat conducting pin-fins, each of said pin-fins having a free end and an attachment end, the attachment end of each of said pin-fins being attached to said base plate, each of said pin-fins having an intake opening wherein the intake opening is oriented to admit cooling fluid moving in a first direction substantially parallel to said base plate, each of said pin-fins having a discharge opening for discharging cooling fluid, each of said pin-fins having a tubular channel extending from the intake opening to the discharge opening, wherein the discharge opening of each of said pin-fins is oriented to discharge cooling fluid in the first direction, +/- 90 degrees.

9. (Original) The heat sink of claim 8, further comprising a baffle adjacent the free end of each of said pin-fins and substantially parallel to said base plate for ducting cooling fluid between said base plate and said baffle.

10. (Original) The heat sink of claim 8, further comprising a ducting system comprising:

a first baffle adjacent the free end of each of said pin-fins and substantially parallel to said base plate; and

a second and third baffles positioned substantially parallel to the first direction and substantially perpendicular to said first baffle;

wherein cooling fluid is ducted between said first, second and third baffles and discharged from said heat sink in substantially the first direction.